

REMARKS/ARGUMENTS

The present amendment and remarks are in response to the Office Action dated October 27, 2009. Claims 1-6, 10-15, 17-19, 23 and 24 are active in the present application. Claims 2, 11, 17, 18 and 24 have been currently amended. Support for amended Claims 2 and 17 can be found on page 19 of the specification. Support for amended Claims 11 and 24 can be found on page 22 of the specification (experimental extenders). Support for amended claim 18 can be found on page 19 of the specification. No new matter is believed to have been introduced by the amended claims.

The Examiner objected to Claim 10 and Claim 18, as being substantial duplicates. Applicants have amended Claim 18, as shown above, and therefore, have obviated this objection.

Claim Rejections under 35 U.S.C. § 103(a)

The Examiner rejected Claims 1-6, 10-15, 17-19, 23 and 24 under 35 U.S.C. § 103(a), as unpatentable over U.S. Patent 5,861,463 (hereinafter the '463 patent), in view of U.S. Patent 5,278,272 (hereinafter the '272 patent). Applicants respectfully traverse for the following reasons.

The prior art must be considered in its entirety, including disclosures that teach away from the claimed invention (see MPEP 2141.02, section VI). The proposed modification cannot render the prior art unsatisfactory for its intended purpose (see MPEP 2143.01, section V). The art must suggest the desirability of the modification. See also *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984, *[t]he mere fact that the prior art could be so modified would not have made the modification obvious, unless the prior art suggested the desirability of the modification.*

The '463 patent is directed to a thermoplastic composition having at least three phases (see for example, Claim 1; abstract; column 1, lines 45-61; and column 10, lines 56-63). The '463 composition is cost-effective, and has improved or maintained low temperature impact performance and mechanical properties (see column 1, lines 38-43). The '463 patent requires that its homogeneous linear or substantially linear ethylene polymer have a density of at least "0.04 g/cm³" higher than the density of its elastomeric impact modifier (see abstract, column 1, lines 55-61, column 2, lines 7-

12, and column 7, lines 39-44). Moreover, preferably the homogeneous linear or substantially linear ethylene polymer has a density of at least “0.05 g/cm³” higher, and more preferably at least “0.06 g/cm³” higher, than the density of the elastomeric impact modifier (see column 7, lines 39-42). In this multi phase composition, discrete particles of the homogeneous linear or substantially linear ethylene polymer are dispersed at least in the elastomeric impact modifier, which, in turn, is dispersed, as discrete particles, in the thermoplastic polymer matrix (see, for example, column 10, lines 56-63). One of ordinary skill in the art would recognize that the at least “0.04 g/cm³” density differential is required in the ‘463 composition to maintain separate phases of the homogeneous linear or substantially linear ethylene polymer and the elastomeric impact modifier. From the disclosure of the ‘463 patent, one skilled in the art would understand that if this density differential is reduced, the miscibility of these two polymer components would increase, and the impact and mechanical properties of the composition would be impaired. Thus, reducing this density differential would diminish the “three-phase” morphology, and thus render the ‘463 patent unsatisfactory for its intended purpose of providing new cost-effective compositions with improved or maintained low temperature impact performance and mechanical properties. Thus, the ‘463 patent teaches away from compositions, as claimed, in which this density differential is not met. The ‘272 patent does not overcome the deficiencies of the ‘463 patent.

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious (see MPEP 2141.02, section I, citing *Stratoflex Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983); *Schenck v. Norton Corp.* 713 F.2d 782 (Fed. Cir. 1983)).

As discussed above, the ‘463 patent requires that its homogeneous linear or substantially linear ethylene polymer have a density of at least “0.04 g/cm³” higher than the density of its elastomeric impact modifier. As discussed, this “0.04 g/cm³” density differential is a critical feature for this patent. Applicants’ claimed invention recites a density differential of at most “0.02 g/cm³” between Component B) and Component A)(b), and this differential represents a 50% difference from the “0.04 g/cm³” differential required by the ‘463 patent. A density differential of “0.01 g/cm³”

represents a 75% difference from the “0.04 g/cm³” differential required by the ‘463 patent.

In addition, the ‘463 patent discloses that its elastomeric impact modifiers particularly have a density less than 0.870 g/cm³ (see column 4, lines 10-14). Thus, a density of “0.870 g/cm³” represents an upper limit on the density for these polymers. In contrast, the first ethylene/ α -olefin interpolymer (Component A)(b)) of Applicants’ claimed invention has a density from 0.870 g/cm³ to 0.9130 g/cm³. Also, based on a lower density limit of 0.855 g/cm³ for the elastomeric impact modifier of the ‘463 patent, the density of the homogeneous linear or substantially linear ethylene polymer of the ‘463 patent must be at least 0.895 g/cm³, which is outside the density range claimed for the second ethylene/ α -olefin interpolymer (Component B) of Applicants’ claimed invention. One of ordinary skill in the art would understand that these differences in densities are not trivial, and result in very different compositions. Moreover, as shown in Table 2 of the ‘463 patent, the third phase polymer (or component (c) – see abstract) has a melt index (I2) ranging from 0.35 to 0.5, indicating a very high molecular weight polymer (Brookfield Viscosities (350°F) greater than 10⁶ for homogeneously branched substantially linear copolymers). In contrast to this, Applicants claim a “very low molecular weight” second ethylene/ α -olefin interpolymer (Component B), with a Brookfield Viscosity (350°F), for example, from 500 cP to 50,000 cP. The compositions of the ‘463 patent are clearly different from Applicants’ claimed compositions, and one skilled in the art would not expect the compositions of the ‘463 patent to have the same properties of Applicants’ claimed compositions. Applicants’ claimed invention, as a whole, is not obvious in view of the ‘463 patent. The ‘272 patent does not overcome the deficiencies of the ‘463 patent.

For at least the above reasons, the ‘463 patent, in view of the ‘272 patent, does not teach or suggest the invention as claimed. Applicants respectfully request the withdrawal of this rejection.

Applicants submit that the present amendment is now in condition for allowance, and request early notice of such action. If further issues remain, Applicants respectfully request that the Examiner call Applicants' undersigned representative.

Respectfully submitted,

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/Jane M. Terry/
Jane M. Terry
Registration No. 53,682
P.O. Box 3503
Midland, Michigan 48674, USA
Phone: 979-238-3424

JMT/lb